

REMARKS

Claim 11 has been rewritten in independent form as amended claim 1 (electrolyte membrane). Claim 4 was amended to incorporate therein the recitation of claim 10. Claim 12 was rewritten in independent form as new claim 18. Claims 9-11 and 12-16 have been canceled, without prejudice. New claims 19-24 depending primarily or secondarily from claim 18 are based on original claims 2, 3 and 13-16, respectively. No new matter has been added.

Entry of the amendments and review and reconsideration on the merits are requested.

Claims 1-5, 7-11 and 14-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,150,426 to Curtin et al in view of U.S. Patent 3,085,083 to Schreyer. Further, claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 2004/018527 to Tatemoto et al (with citation to U.S. 2005/0228127 A1) in view of Schreyer.

Applicants traverse, and respectfully request the Examiner to reconsider for the following reasons.

The present invention is directed to an electrolyte membrane comprising a fluoropolymer containing acid/acid salt groups and having -CF₂H groups at polymer chain terminals (Claim 1).

The present invention is also directed to an immobilized active substance material comprising the fluoropolymer and an active substance (Claim 18).

Electrolyte membranes and immobilized active substance materials require stability against OH radical.

The Examiner considered that one of ordinary skill in the art would have been motivated to modify the fluoropolymer of Curtin with the end groups taught by Schreyer because terminating a polymer in a $\text{-CF}_2\text{H}$ end group is said to add to the thermal stability and coercion resistance of the polymer.

However, investigators in the field of polymers containing acid/acid groups believe that $\text{-CF}_2\text{H}$ group is an unstable functional group resulting in the problem of gradual polymer decomposition.

Although Schreyer discloses a polymer having a $\text{-CF}_2\text{H}$ group, Schreyer does not disclose that the polymer has resistance against OH radical.

So as to further distinguish the invention from the cited prior art, the claims as amended are now directed to an electrolyte membrane, a method of making the same and an immobilized active substance material comprising a fluoropolymer having $\text{-CF}_2\text{H}$ groups and the active substance. Thus, because Schreyer does not disclose that the polymer has resistance against OH radicals, the claims presented herein are unobvious over cited prior art even if Schreyer is combined with Curtin et al or Tatemoto et al.

Withdrawal of all rejections and allowance of claims 1-8, 11 and 17-24 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Application No.: 10/583,081

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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